

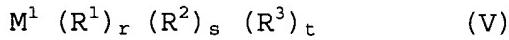


ATTACHMENT A

Claims 1 - 20: (Cancelled)

5 21. (New) A process for preparing a catalyst solid for olefin polymerization by contacting, without any isolation of an intermediate,

- (A) at least one organic transition metal compound;
10 (B) at least one organometallic compound of formula (V)



where

15 M^1 is an alkali metal, an alkaline earth metal, or a metal of group 13 of the Periodic Table;

20 R^1 is hydrogen, C_1-C_{10} -alkyl, C_6-C_{15} -aryl, halo- C_1-C_{10} -alkyl, halo- C_6-C_{15} -aryl, C_7-C_{40} -arylalkyl, C_7-C_{40} -alkylaryl, C_1-C_{10} -alkoxy, halo- C_7-C_{40} -alkylaryl, halo- C_7-C_{40} -arylalkyl, or halo- C_1-C_{10} -alkoxy;

25 R^2 and R^3 are each hydrogen, halogen, C_1-C_{10} -alkyl, C_6-C_{15} -aryl, halo- C_1-C_{10} -alkyl, halo- C_6-C_{15} -aryl, C_7-C_{40} -arylalkyl, C_7-C_{40} -alkylaryl, C_1-C_{10} -alkoxy, halo- C_7-C_{40} -alkylaryl, halo- C_7-C_{40} -arylalkyl, or halo- C_1-C_{10} -alkoxy;

30 r is an integer from 1 to 3; and
 s and t are integers from 0 to 2, where the sum $r+s+t$ corresponds to the valence of M^1 ;

35 (C) at least one organic compound comprising at least one functional group comprising active hydrogen, wherein the functional group is selected from the groups consisting of hydroxyl group, primary and secondary amino groups, mercapto groups, silanol

groups, carboxyl groups, amido groups, and imido groups;

- (D) at least one Lewis base; and
- (E) at least one support.

5

22. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 21, wherein the component (B) is a mixture of at least two different organometallic compounds.
10

23. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 22, wherein the component (B) is a mixture of at least one aluminum-containing organometallic compound and at least one boron-containing organometallic compound.
15

20 24. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 22, wherein the component (B) comprises at least two different aluminum-containing organometallic compounds.

25

25. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 21, wherein the organic compound of component (C) comprises at least one hydroxyl group.
30

26. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 25, wherein the component (C) is a compound of formula (VI)
35



where

40 A is an atom of group 13, 14 or 15 of the Periodic

Table, or a group comprising from 2 to 20 carbon atoms;

5 R⁴ are identical or different, and are each independently of one another, hydrogen, halogen, C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl, 10 C₇-C₄₀-haloalkylaryl, or OSiR₃⁵; where

15 R⁵ are identical or different, and are each independently of one another, hydrogen, halogen, C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl, 20 or C₇-C₄₀-haloalkylaryl;

25 Y is at least 1; and

30 x is an integer from 0 to 41.

27. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 23, wherein the component (B) comprises at least two different aluminum-containing organometallic compounds.

35 28. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 27, wherein the organic compound of component (C) comprises at least one hydroxyl group.

40 29. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 28, wherein the component (C) is a compound of formula (VI)



where

5 A is an atom of main group 13, 14 or 15 of the
Periodic Table, or a group comprising from 2 to 20
carbon atoms;

10 R⁴ are identical or different, and are each
independently of one another, hydrogen, halogen,
C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-
aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-
arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl,
C₇-C₄₀-haloalkylaryl, or OSiR₃⁵, where

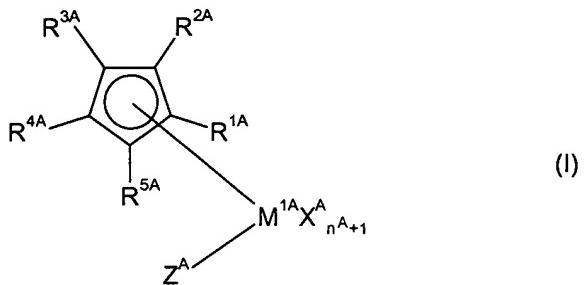
15 R⁵ are identical or different, and are each
independently of one another, hydrogen, halogen,
C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-
aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-
arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl,
or C₇-C₄₀-haloalkylaryl;

25 y is at least 1; and

 x is an integer from 0 to 41.

30 30. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 28, wherein the
component (A) comprises at least one cyclopentadienyl-type
ligand.

35 31. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 21, wherein the
component (A) is of formula (I)



5

wherein

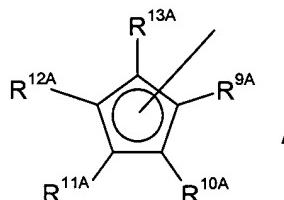
- 10 M^{1A} is titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, molybdenum or tungsten, or an element of group 3 or lanthanides of the Periodic Table;
- 15 X^A are identical or different, and are each independently of one another, fluorine, chlorine, bromine, iodine, hydrogen, C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₆-C₁₅-aryl, C₇-C₄₀-alkylaryl, C₇-C₄₀-arylalkyl, -OR^{6A}, or -NR^{6A}R^{7A}, or two X^A radicals are joined to form a substituted or unsubstituted diene ligand;
- 25 R^{6A} and R^{7A} are identical or different, and are each independently of one another, C₁-C₁₀-alkyl, C₆-C₁₅-aryl, C₇-C₄₀-arylalkyl, C₇-C₄₀-alkylaryl, fluoroalkyl, fluoroaryl, wherein the C₇-C₄₀-arylalkyl or C₇-C₄₀-alkylaryl comprise from 1 to 19 carbon atoms in the alkyl radical and from 6 to 21 carbon atoms in the aryl radical;
- 35 n^A is 1, 2 or 3, where n^A is such that component (A) of formula (I) is uncharged;
- 40 R^{1A} to R^{5A} are identical or different, and are each independently of one another, hydrogen,

5 C₁-C₂₂-alkyl, 5- to 7-membered cycloalkyl or
cycloalkenyl which optionally bear C₁-C₁₀-
alkyl groups as substituents, C₂-C₂₂-alkenyl,
10 C₆-C₂₂-aryl, C₇-C₄₀-arylalkyl, C₇-C₄₀-alkylaryl,
-NR^{8A}₂, -N(SiR^{8A}₃)₂, -OR^{8A}, -OSiR^{8A}₃, -SiR^{8A}₃,
where the radicals R^{1A} to R^{5A} may optionally
be substituted by at least one halogen, or
15 two radicals R^{1A} to R^{5A}, in particular
adjacent radicals, together with the atoms
connecting them are joined to form a five-,
six- or seven-membered ring, or a five-, six-
or seven-membered heterocycle comprising at
least one atom selected from the group
20 consisting of N, P, O and S;

25 R^{8A} are identical or different, and are each
independently of one another, C₁-C₁₀-alkyl,
C₃-C₁₀-cycloalkyl, C₆-C₁₅-aryl, C₁-C₄-alkoxy,
or C₆-C₁₀-aryloxy; and

30 Z^A is as defined for X^A, or is

25



30

where

35 R^{9A} to R^{13A} are identical or different, and are each
independently of one another, hydrogen,
C₁-C₂₂-alkyl, 5- to 7-membered cycloalkyl or
cycloalkenyl which optionally bear C₁-C₁₀-
alkyl groups as substituents, C₂-C₂₂-alkenyl,
C₆-C₂₂-aryl, C₇-C₄₀-arylalkyl, C₇-C₄₀-alkylaryl,
40 -NR^{14A}₂, -N(SiR^{14A}₃)₂, -OR^{14A}, -OSiR^{14A}₃, or -

5 SiR^{14A}_3 , where R^{9A} to R^{13A} may also be substituted by halogen, and/or two radicals R^{9A} to R^{13A} together with the atoms connecting them may be joined to form a five-, six- or seven-membered ring, or a five-, six- or seven-membered heterocycle comprising at least one atom selected from the group consisting of N, P, O and S;

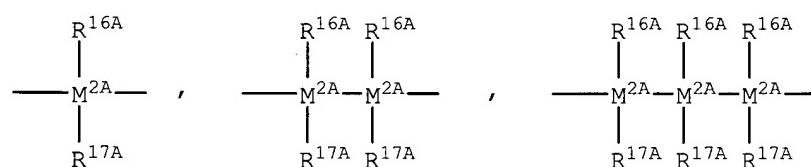
10

10 R^{14A} are identical or different, and are each independently of one another, $\text{C}_1\text{-C}_{10}$ -alkyl, $\text{C}_3\text{-C}_{10}$ -cycloalkyl, $\text{C}_6\text{-C}_{15}$ -aryl, $\text{C}_1\text{-C}_4$ -alkoxy, or $\text{C}_6\text{-C}_{10}$ -aryloxy, or R^{4A} and Z^A together form an $-\text{R}^{15A}\text{vA-A}^A-$ group, where

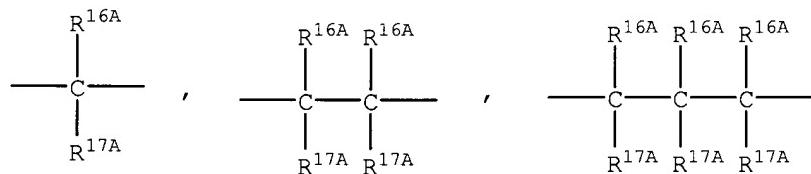
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R^{15A}

is

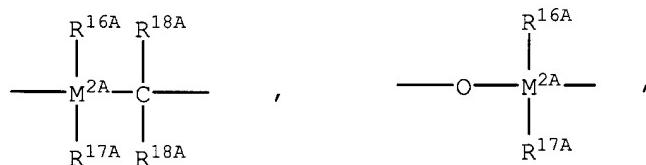


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25

30



35 $-\text{BR}^{16A}-$, $-(\text{BNR}^{16A}\text{R}^{17A})-$, $-\text{AlR}^{16A}-$, $-\text{Ge}-$, $-\text{Sn}-$, $-\text{O}-$,
 -S-, $-\text{SO}-$, $-\text{SO}_2-$, $-\text{NR}^{16A}-$, $-\text{CO}-$, $-\text{PR}^{16A}-$ or
 $(\text{POR}^{16A})-$,

40

where

R^{16A} , R^{17A} and R^{18A} are identical or different, and are each independently of one another, hydrogen, halogen, a trimethylsilyl group, a C_1 - C_{10} -alkyl group, a C_1 - C_{10} -fluoroalkyl group, a C_6 - C_{10} -fluoroaryl group, a C_6 - C_{10} -aryl group, a C_1 - C_{10} -alkoxy group, a C_7 - C_{15} -alkylaryloxy group, a C_2 - C_{10} -alkenyl group, a C_7 - C_{40} -arylalkyl group, a C_8 - C_{40} -arylalkenyl group, or a C_7 - C_{40} -alkylaryl group, or two adjacent radicals together with the atoms connecting them form a saturated or unsaturated ring having from 4 to 15 carbon atoms;

20 M^{2A} is silicon, germanium, or tin;

25 A^A is $-O-$, $-S-$, $-NR^{19A}-$, $-PR^{19A}-$, $-O-R^{19A}$, $-NR^{19A}_2$, $-PR^{19A}_2$, or an unsubstituted, substituted or fused, heterocyclic ring system, where

30 R^{19A} are identical or different, and are each independently of one another, C_1 - C_{10} -alkyl, C_6 - C_{15} -aryl, C_3 - C_{10} -cycloalkyl, C_7 - C_{18} -alkylaryl, or $-Si(R^{20A})_3$;

35 R^{20A} is hydrogen, C_1 - C_{10} -alkyl, C_6 - C_{15} -aryl which optionally bear C_1 - C_4 -alkyl groups as substituents, or C_3 - C_{10} -cycloalkyl; and

40 v^A is 1 or, if A^A is an unsubstituted,

substituted or fused, heterocyclic ring system, 1 or 0

5 or R^{4A} and R^{12A} together form $-R^{15A}-$.

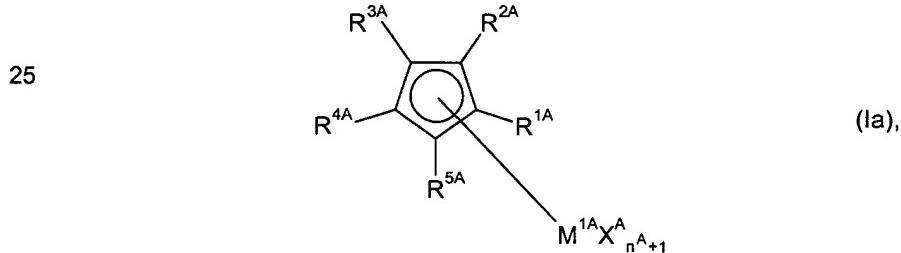
32. (New) The process for preparing a catalyst solid for olefin polymerization as claimed in claim 31, wherein

10 X^A are identical, and are fluorine, chlorine, bromine, C₁-C₇-alkyl or arylalkyl, or two X^A together form, a 1,3-diene ligand, or a biaryloxy group; and

15

M^{2A} is silicon.

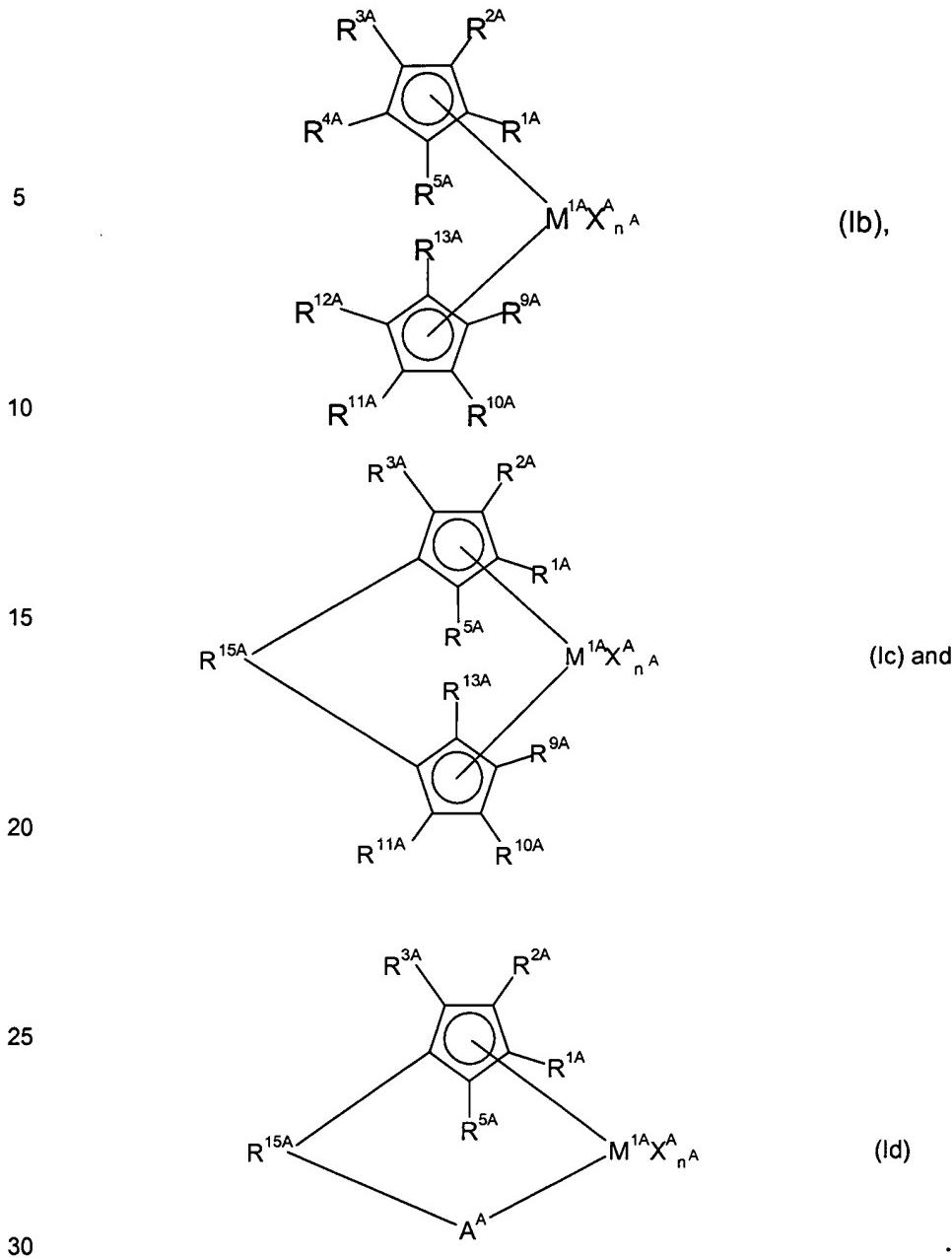
33. (New) The process for preparing a catalyst solid for
20 olefin polymerization as claimed in claim 31, wherein the compound of formula (I) is selected from the group consisting of



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35

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wherein in formula (Ia)

M^{1A} is titanium or chromium;

X^A is chlorine, C₁-C₄-alkyl, phenyl, alkoxy, or aryloxy;

n^A is 1 or 2; and

R^{1A} to R^{5A} are each hydrogen, or C₁-C₄-alkyl, or two adjacent R^{1A} to R^{5A} radicals together with the

atoms connecting them form a substituted or unsubstituted, unsaturated six-membered ring;

wherein in formula (Ib)

5

M^{1A} is titanium, zirconium, hafnium, or chromium;
X^A is chlorine, C₁-C₄-alkyl, or benzyl, or two X^A radicals form a substituted or unsubstituted
10 butadiene ligand;
n^A is 1 or 2, with the proviso that if M^{1A} is chromium, then n^A is 0;
R^{1A} to R^{5A} are each hydrogen, C₁-C₈-alkyl, C₆-C₁₀-aryl, -
15 NR^{8A}₂, -OSiR^{8A}₃, -SiR^{8A}₃, or -Si(R^{8A})₃; and
R^{9A} to R^{13A} are each hydrogen, C₁-C₈-alkyl, C₆-C₁₀-aryl, -
NR^{8A}₂, -OSiR^{8A}₃, -SiR^{8A}₃, or -Si(R^{8A})₃;
or two R^{1A} to R^{5A} radicals and/or two R^{9A} to R^{13A} radicals
20 together with the cyclopentadienyl ring form an indenyl or substituted indenyl system;

wherein in formula (Ic)

25

R^{1A} and R^{9A} are identical or different, and are each independently of one another, hydrogen, or a C₁-C₁₀-alkyl group;
R^{5A} and R^{13A} are identical or different, and are each independently of one another, hydrogen, methyl, ethyl, isopropyl, or tert-butyl;
R^{3A} and R^{11A} are each C₁-C₄-alkyl; and
R^{2A} and R^{10A} are each hydrogen; or two adjacent R^{2A} and R^{3A} radicals, or two R^{10A} and R^{11A} radicals together form a saturated or unsaturated cyclic group comprising from 4 to 44 carbon atoms;
40 R^{15A} is -M^{2A}R^{16A}R^{17A}- , -CR^{16A}R^{17A}-CR^{16A}R^{17A}- , -BR^{16A}- ,

or $-BNR^{16A}R^{17A}-$;

5 M^{1A} is titanium, zirconium, or hafnium; and
 X^A are identical or different and are each
 chlorine, C_1-C_4 -alkyl, benzyl, phenyl, or C_7-C_{15} -alkylaryloxy;

wherein in formula (Id)

10 M^{1A} is titanium, or zirconium;
 X^A is chlorine, C_1-C_4 -alkyl, or phenyl, or
 two X radicals together form a
 substituted or unsubstituted butadiene
15 ligand;
 R^{15A} is $-SiR^{16A}R^{17A}-$, or $-CR^{16A}R^{17A}-CR^{16A}R^{17A}-$;
 and
 A^A is $-O-$, $-S-$, or $-NR^{19A}-$;
20 R^{1A} to R^{3A} and R^{5A} are each hydrogen, C_1-C_{10} -alkyl, C_3-C_{10} -cycloalkyl, C_6-C_{15} -aryl, or $-Si(R^{8A})_3$,
 or two adjacent radicals form a cyclic
 group comprising from 4 to 12 carbon
25 atoms.

34. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 29, wherein the
30 component (A) is
bis(cyclopentadienyl)zirconium dichloride,
bis(pentamethylcyclopentadienyl)zirconium dichloride,
bis(methylcyclopentadienyl)zirconium dichloride,
35 bis(ethylcyclopentadienyl)zirconium dichloride,
bis(n-butylcyclopentadienyl)zirconium dichloride,
bis(1-n-butyl-3-methylcyclopentadienyl)zirconium dichloride,
bis(indenyl)zirconium dichloride,
bis(tetrahydroindenyl)zirconium dichloride,
40 bis(trimethylsilylcyclopentadienyl)zirconium dichloride,

bis(cyclopentadienyl)zirconium dimethyl,
bis(pentamethylcyclopentadienyl)zirconium dimethyl,
bis(methylcyclopentadienyl)zirconium dimethyl,
5 bis(ethylcyclopentadienyl)zirconium dimethyl,
bis(n-butylcyclopentadienyl)zirconium dimethyl,
bis(1-n-butyl-3-methylcyclopentadienyl)zirconium dimethyl,
bis(indenyl)zirconium dimethyl,
bis(tetrahydroindenyl)zirconium didimethyl,
10 bis(trimethylsilylcyclopentadienyl)zirconium dimethyl,
dimethylsilanediyl(2-methyl-4-phenylindenyl)-(2,5-dimethyl-N-phenyl-4-azapentalene)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-phenyl-4-
15 hydroazulenyl)zirconium dichloride,
dimethylsilanediylbis(2-ethyl-4-phenyl-4-
hydroazulenyl)zirconium dichloride,
dimethylsilanediylbis(cyclopentadienyl)zirconium dichloride,
20 dimethylsilanediylbis(indenyl)zirconium dichloride,
dimethylsilanediylbis(tetrahydroindenyl)zirconium
dichloride,
ethylenebis(cyclopentadienyl)zirconium dichloride,
25 ethylenebis(indenyl)zirconium dichloride,
ethylenebis(tetrahydroindenyl)zirconium dichloride,
tetramethylethylene-9-fluorenylcyclopentadienylzirconium
dichloride,
30 dimethylsilanediylbis(3-tert-butyl-5-
methylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(3-tert-butyl-5-
ethylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(2-methylindenyl)zirconium dichloride,
35 dimethylsilanediylbis(2-isopropylindenyl)zirconium
dichloride,
dimethylsilanediylbis(2-tert-butyldindenyl)zirconium
dichloride,
40 diethylsilanediylbis(2-methylindenyl)zirconium dibromide,

dimethylsilanediylbis(3-methyl-5-
methylcyclopentadienyl)zirconium dichloride,
dimethylsilanediylbis(3-ethyl-5-
isopropylcyclopentadienyl)zirconium dichloride,
5 dimethylsilanediylbis(2-ethylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium
dichloride
dimethylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium
10 dichloride
methylphenylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium
dichloride,
methylphenylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium
15 dichloride,
diphenylsilanediylbis(2-methyl-4,5-benzindenyl)zirconium
dichloride,
diphenylsilanediylbis(2-ethyl-4,5-benzindenyl)zirconium
20 dichloride,
diphenylsilanediylbis(2-methylindenyl)hafnium dichloride,
dimethylsilanediylbis(2-methyl-4-phenylindenyl)zirconium
dichloride,
25 dimethylsilanediylbis(2-ethyl-4-phenylindenyl)zirconium
dichloride,
dimethylsilanediylbis(2-methyl-4-(1-
naphthyl)indenyl)zirconium dichloride,
30 dimethylsilanediylbis(2-ethyl-4-(1-
naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-(1-
naphthyl)indenyl)zirconium dichloride,
35 dimethylsilanediylbis(2-i-butyl-4-(1-
naphthyl)indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-(9-
phenanthryl)indenyl)zirconium dichloride,
40 dimethylsilanediylbis(2-methyl-4-isopropylindenyl)zirconium
dichloride,

dimethylsilanediylbis(2,7-dimethyl-4-isopropylindenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4,6-diisopropylindenyl)zirconium dichloride,
5 dimethylsilanediylbis(2-methyl-4-[p-trifluoromethylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-methyl-4-[3',5'-dimethylphenyl]indenyl)zirconium dichloride,
10 dimethylsilanediylbis(2-methyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
diethylsilanediylbis(2-methyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
15 dimethylsilanediylbis(2-ethyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-propyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
20 dimethylsilanediylbis(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediylbis(2-n-butyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
25 dimethylsilanediylbis(2-hexyl-4-[4'-tert-butylphenyl]indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-phenylinenyl)-(2-methyl-4-phenylinenyl)zirconium dichloride,
30 dimethylsilanediyl(2-isopropyl-4-(1-naphthyl)indenyl)-(2-methyl-4-(1-naphthyl)indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]-indenyl)zirconium dichloride,
35 dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-ethyl-4-[4'-tert-butylphenyl]-indenyl)zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-butylphenyl]indenyl)-(2-methyl-4-[3',5'-bis-tert-butylphenyl]indenyl)zirconium dichloride,
40

butylphenyl] indenyl) zirconium dichloride,
dimethylsilanediyl(2-isopropyl-4-[4'-tert-
butylphenyl] indenyl)- (2-methyl-4-[1'-naphthyl] indenyl)-
zirconium dichloride,
5 ethylene(2-isopropyl-4-[4'-tert-butylphenyl] indenyl)- (2-
methyl-4-[4'-tert-butylphenyl] indenyl) zirconium dichloride,
di(2,6-di-i-propylphenyl)-2,3-
dimethyldiazabutadienepalladium dichloride,
10 di(di-i-propylphenyl)-2,3-dimethyldiazabutadienenickel
dichloride,
di(2,6-di-i-propylphenyl)-2,3-
dimethyldiazabutadienedimethylpalladium,
15 di(2,6-di-i-propylphenyl)-2,3-
dimethyldiazabutadienedimethylnickel,
di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienepalladium
dichloride,
20 di(2,6-dimethylphenyl)-2,3-dimethyldiazabutadienenickel
dichloride,
di(2,6-dimethylphenyl)-2,3-
dimethyldiazabutadienedimethylpalladium,
25 di(2,6-dimethylphenyl)-2,3-
dimethyldiazabutadienedimethylnickel,
di(2-methylphenyl)-2,3-dimethyldiazabutadienepalladium
dichloride,
30 di(2-methylphenyl)-2,3-dimethyldiazabutadienenickel
dichloride,
di(2-methylphenyl)-2,3-
dimethyldiazabutadienedimethylpalladium,
35 di(2-methylphenyl)-2,3-dimethyldiazabutadienedimethylnickel,
diphenyl-2,3-dimethyldiazabutadienepalladium dichloride,
diphenyl-2,3-dimethyldiazabutadienenickel dichloride,
diphenyl-2,3-dimethyldiazabutadienedimethylpalladium,
40 diphenyl-2,3-dimethyldiazabutadienedimethylnickel,
di(2,6-dimethylphenyl)azanaphthenepalladium dichloride,

di(2,6-dimethylphenyl)azanaphthenenickel dichloride,
di(2,6-dimethylphenyl)azanaphthenedimethylpalladium,
di(2,6-dimethylphenyl)azanaphthenedimethylnickel,
5 1,1'-bipyridylpalladium dichloride,
1,1'-bipyridynickel dichloride,
1,1'-bipyridyldimethylpalladium,
1,1'-bipyridyldimethylnickel,
1-(8-quinolyl)-2-methyl-4-
10 methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-3-isopropyl-5-
methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-3-tert-butyl-5-
15 methylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)-2,3,4,5-
tetramethylcyclopentadienylchromium(III) dichloride,
1-(8-quinolyl)tetrahydroindenylchromium(III) dichloride,
20 1-(8-quinolyl)indenylchromium(III) dichloride,
1-(8-quinolyl)-2-methylindenylchromium(III) dichloride,
1-(8-quinolyl)-2-isopropylindenylchromium(III) dichloride,
1-(8-quinolyl)-2-ethylindenylchromium(III) dichloride,
25 1-(8-quinolyl)-2-tert-butylindenylchromium(III) dichloride,
1-(8-quinolyl)benzindenylchromium(III) dichloride,
1-(8-quinolyl)-2-methylbenzindenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-methyl-4-
30 methylcyclopentadienylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2,3,4,5-
tetramethylcyclopentadienylchromium(III) dichloride,
1-(8-(2-methylquinolyl))tetrahydroindenylchromium(III)
dichloride,
35 1-(8-(2-methylquinolyl))indenylchromium(III) dichloride,
1-(8-(2-methylquinolyl))-2-methylindenylchromium(III)
dichloride,
1-(8-(2-methylquinolyl))-2-isopropylindenylchromium(III)
40 dichloride,

1 - (8 - (2-methylquinolyl)) - 2- ethylindenylchromium(III)
dichloride,
1 - (8 - (2-methylquinolyl)) - 2- tert - butylindenylchromium(III)
dichloride,
5 1 - (8 - (2-methylquinolyl)) benzindenylchromium(III) dichloride,
1 - (8 - (2-methylquinolyl)) - 2 - methylbenzindenylchromium(III)
dichloride,
[1,3,5-tri(methyl)-1,3,5-triazacyclohexane] chromium
10 trichloride,
[1,3,5-tri(ethyl)-1,3,5-triazacyclohexane] chromium
trichloride,
[1,3,5-tri(octyl)-1,3,5-triazacyclohexane] chromium
15 trichloride,
[1,3,5-tri(dodecyl)-1,3,5-triazacyclohexane] chromium
trichloride,
[1,3,5-tri(benzyl)-1,3,5-triazacyclohexane] chromium
20 trichloride, or mixtures thereof.

35. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 21, wherein said
25 organometallic compound of formula (V) is n-butyllithium, n-
butyl-n-octylmagnesium, n-butyl-n-heptylmagnesium,
triphenylaluminum, triisoprenaluminum, tri-n-octylaluminum,
tri-n-hexylaluminum, tri-n-butylaluminum,
30 triisobutylaluminum, tri-n-propylaluminum, tri-
isopropylaluminum, triethylaluminum,
trispentafluorophenylborane, trimethylaluminum, or mixtures
thereof.

35 36. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 34, wherein said
organometallic compound of formula (V) is n-butyllithium, n-
butyl-n-octylmagnesium, n-butyl-n-heptylmagnesium,
40 triphenylaluminum, triisoprenaluminum, tri-n-octylaluminum,

tri-n-hexylaluminum, tri-n-butylaluminum,
triisobutylaluminum, tri-n-propylaluminum, tri-
isopropylaluminum, triethylaluminum,
trispentafluorophenylborane, trimethylaluminum, or mixtures
thereof.

37. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 21, wherein said
organometallic compound of formula (V) is at least one
borinic acid of formula $R^4_2B(OH)$, or at least one boronic
acid of formula $R^4B(OH)_2$.

38. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 21, wherein said
Lewis base is methylamine, aniline, dimethylamine,
diethylamine, N-methylaniline, diphenylamine,
trimethylamine, triethylamine, tripropylamine,
tributylamine, N,N-dimethylaniline, N,N-diethylaniline, N,N-
dimethylcyclohexylamine, benzylamine, N-benzyldimethylamine,
N-benzyldiethylamine, N-benzylbutylamine, N-benzyl-tert-
butylamine, N'-benzyl-N,N-dimethylethylenediamine,
N-benzylethylenediamine, N-benzylisopropylamine, N-
benzylmethylamine, N-benzylethylamine, N-benzyl-1-
phenylethylamine, N-benzyl-2-phenylethylamine, N-
benzylpiperazine, or mixtures thereof.

39. (New) The process for preparing a catalyst solid for
olefin polymerization as claimed in claim 37, wherein said
Lewis base is methylamine, aniline, dimethylamine,
diethylamine, N-methylaniline, diphenylamine,
trimethylamine, triethylamine, tripropylamine,
tributylamine, N,N-dimethylaniline, N,N-diethylaniline, N,N-
dimethylcyclohexylamine, benzylamine, N-benzyldimethylamine,
N-benzyldiethylamine, N-benzylbutylamine, N-benzyl-tert-

butylamine, N'-benzyl-N,N-dimethylethylenediamine,
N-benzylethylenediamine, N-benzylisopropylamine, N-
benzylmethylamine, N-benzy lethylamine, N-benzyl-1-
phenylethylamine, N-benzyl-2-phenylethylamine, N-
5 benzylpiperazine, or mixtures thereof.

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